

Mitsubishi Electric Programmable Controller Upgrade Tool

Conversion Adapter

Model
ERNT-1Y2R904914

User’s Manual

50CM-D180413-A(1811)

MITSUBISHI ELECTRIC ENGINEERING COMPANY LIMITED

HEAD OFFICE: Hulic KUDAN BLDG.1-13-5, KUDANKITA CHIYODA-KU, TOKYO 102-0073, JAPAN
NAGOYA ENGINEERING OFFICE:139 SHIMOYASHIKICHO-SHIMOYASHIKI, KASUGAI, AICHI 486-0906, JAPAN

● SAFETY PRECAUTIONS ● (Always read these precautions prior to use.)

Before using this product, please read this manual carefully and pay full attention to safety to ensure that the product is used correctly.

The precautions presented in this manual are concerned with this product only. For Programmable Controller system safety precautions, refer to "Safety Guidelines" for MELSEC iQ-R Series Modules.

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

In this manual, the safety precautions are ranked as "WARNING" and "CAUTION."

Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.

Indicates that incorrect handling may cause hazardous conditions, resulting in medium or minor injury and/or property damage.

Note that failure to observe the CAUTION level instructions may lead to a serious consequence according to the circumstances. Always follow the precautions of both levels because they are important to personal safety. Please keep this manual in an easy-to-access location for future reference, and be sure to provide the manual to the end user.

【Precautions before using】

- When replacing with the MELSEC iQ-R Series, be sure to refer to the Programmable Controller Module manuals to check the differences in performance, functionality, CPU input/output signals, buffer memory addresses and the like.

【Installation Precautions】

- Use the conversion adapter and conversion adapter anchor base in the environment conditions described in the general specifications in "Safety Guidelines" for MELSEC iQ-R Series Modules. Failure to do so could lead to electric shock, fire, malfunction or product failure or deterioration.
- Do not come in direct contact with the conductive area of the conversion adapter. Doing so could lead to system malfunction or failure.
- Fully secure the conversion adapter and conversion adapter anchor base using the installation screws, and tighten the installation screws securely within the specified torque range. Failure to do so could cause the conversion adapter and anchor base to fall, resulting in conversion adapter and conversion adapter anchor base damage.
- Always check for correct match between MELSEC iQ-R Series and the conversion adapter. Incorrect match can cause damage to the MELSEC iQ-R Series module.

【Wiring Precautions】

- Be sure to shut off all phases of the external power supply before performing installation or wiring work. Failure to do so could result in electric shock or product damage.
- If you want to energize and run the unit after completing the installation and wiring work, be sure to close the terminal block cover attached to the terminal block. Failure to do so could result in electric shock.

CAUTION

- Properly wire the conversion adapter after verifying the specifications and terminal layout of the module to be used. Connecting a power supply with a different rating or improper wiring could lead to fire or product failure.
- Securely tighten the conversion adapter installation screws, conversion adapter anchor base installation screws and terminal block installation screws within the specified torque range. A loose screw may result in a short circuit, fire or malfunction. An excessively tightened screw may result in screw or conversion adapter damage, causing the conversion adapter to fall, a short circuit or product malfunction.
- Do not allow foreign matter such as cuttings or wiring shavings to enter the conversion adapter or module. Doing so could lead to fire, failure or malfunction.

【Startup and Maintenance Precautions】

- Do not touch the terminals during energization. Doing so could result in electric shock or malfunction.

【Startup and Maintenance Precautions】

- Be sure to shut off all phases of the external power supply before cleaning and retightening the terminal screws. Failure to do so could lead to electric shock. Excessively tightened screws could result in conversion adapter or input/output module damage, causing the conversion adapter to fall, a short circuit or product malfunction.

CAUTION

- Do not disassemble or modify the conversion adapter. Doing so could lead to failure, malfunction, injury or fire.
- The conversion adapter case is made of resin. Do not drop or apply excessive impact to the case. Doing so could lead to conversion adapter damage.

【Disposal Precautions】

- When disposing of the product, treat it as industrial waste.

● 安全注意事项 ● (使用前请务必阅读)

使用本产品时, 请仔细阅读本手册, 并充分注意安全, 正确地使用产品。
本手册中标注的注意事项仅记载了与本产品相关的内容。关于可编程控制器系统的安全注意事项, 请参阅MELSEC iQ-R系列的“安全使用”。
请勿在所记载内容的范围外使用, 否则会损坏产品的保护功能。
在本●安全注意事项●中, 安全注意事项的等级分为「警告」和「注意」。

警告

表示错误操作可能造成危险后果, 引起死亡或重伤事故。

注意

表示错误操作可能造成危险后果, 引起中度伤害, 轻伤及财产损失。

另外, 根据情况不同, 即使是注意中记载的事项, 也可能引发严重后果。不管哪个记载的都是非常重要的内容, 请务必遵守。
请妥善保管本手册, 以便需要时取阅, 并将本手册交给最终用户。

【使用前的注意事项】

- 从替换为 MELSEC iQ-R 系列时, 为了对性能、功能、针对 CPU 的输入输出信号、缓冲存储器地址等的差异进行确认, 必须参照对象可编程控制器模块的手册使用。

【安装注意事项】

- 应在 MELSEC iQ-R 系列“安全使用”中记载的通用规格环境下使用转换适配器及转换适配器固定台。如果在一般规格范围以外的环境中使用, 可能导致触电、火灾、误动作、产品的损坏或劣化。
- 请不要直接触摸转换适配器的导电部分。否则可能会造成系统误动作、故障。
- 转换适配器及转换适配器固定台应通过安装螺栓切实地加以固定, 安装螺栓应在规定的扭矩范围内切实地拧紧。可能因掉落而导致转换适配器及转换适配器固定台破损。
- 请务必确认 MELSEC iQ-R 系列模块和转换适配器的组合是否正确。在错误组合下使用时, 可能会导致 MELSEC iQ-R 系列模块损坏。

【接线注意事项】

- 必须将外部供应全相断断开后再进行安装作业等。如果未全相断开, 可能会导致触电或产品损坏。
- 安装、配线作业完成之后进行通电、运行时, 必须关闭端子排的端子排盖板。如果未关闭端子排盖板, 可能会导致触电。

注意

- 请确认所使用模块的规格及端子排列后正确地进行转换适配器的接线。连接不符合额定值的电源或误配线, 会导致火灾或故障。
- 转换适配器安装螺栓、转换适配器固定台安装螺栓、端子排安装螺栓应在规定的扭矩范围内切实地拧紧。如果螺栓拧得过松, 会导致短路、火灾或误动作。如果螺栓拧得过紧, 可能造成螺栓及转换适配器破损从而导致掉落、短路或误动作。
- 请注意不要让切屑或接线头等异物进入转换适配器及模块内。会导致火灾、故障、误动作。

【启动和维护注意事项】

- 在通电状态下请勿触摸端子。可能会导致触电或误动作。
- 在清扫或重新紧固端子螺栓时, 必须将外部供应全相断断开后再进行。如果未全相断开, 可能会导致触电。如果螺栓拧得过紧, 可能会造成转换适配器或输入/输出模块的破损从而导致掉落、短路或误动作。

注意

- 请不要拆卸、改造转换适配器。否则可能会导致故障、误动作、受伤或火灾。
- 转换适配器的外壳由树脂制成, 因此请避免掉落或使其受到剧烈冲击。否则可能会损坏转换适配器。

【废弃注意事项】

- 废弃时请将本产品作为工业废弃物处理。

(产品名) Renewal Tool的基于

「电器电子产品有害物质限制使用标识要求」的表示方式



Note: This symbol mark is for China only.

含有有害6物质的名称, 含有量, 含有部品

本产品中所含有的有害6物质的名称, 含有量, 含有部品如下表所示。

产品中有害物质的名称及含量

部件名称	有害物质					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
电路板组件 (包括印刷电路板及其构成的零部件, 如电阻、电容、集成电路、连接器等)	○	○	○	○	○	○
安装金属零件	○	○	○	○	○	○
外壳	×	○	○	○	○	○

本表格依据SJ/T 11364 的规定编制。

○: 表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572 规定的限量要求以下。

×: 表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572 规定的限量要求。

EMC AND LOW VOLTAGE DIRECTIVES

Compliance to the EMC Directive, which is one of the EU Directives, has been a legal obligation for the products sold in European countries since 1996 as well as the Low Voltage Directive since 1997. Manufacturers who recognize their products are compliant to the EMC and Low Voltage Directives are required to declare that print a "CE mark" on their products.

Authorized representative in Europe

Authorized representative in Europe is shown below.
Name: Mitsubishi Electric Europe B.V.
Address: Mitsubishi-Electric-Platz 1, 40882 Ratingen, Germany

1. Overview

This manual describes the Mitsubishi Electric Programmable Controller Upgrade Tool conversion adapter (ERNT-1Y2R904914).

When replacing with the MELSEC iQ-R Series, be sure to refer to the Programmable Controller Module manuals to check the differences in performance, functionality, CPU input/output signals, buffer memory addresses and the like. Once you have opened the packaging, verify that it contains the following products.

Product	Shape	Quantity
Conversion adapter		1
Mounting bracket		1
Mounting bracket fixing screw (M3.5 x 6)		4
This manual	—	1

2. Specifications

2.1 General Specifications

Item	Specifications					
Operating ambient temperature	0 to 55℃(Maximum surrounding air temperature 55℃)					
Storage ambient temperature	-25 to 75℃					
Operating ambient humidity	5 to 95%RH, non-condensing					
Storage ambient humidity						
Vibration resistance	Compliant with JIS B 3502 and IEC 61131-2		Frequency	Constant acceleration	Half amplitude	Sweep count
		Under intermittent vibration	5 to 8.4Hz	—	3.5mm	10 times each in X, Y, Z directions
			8.4 to 150Hz	9.8m/s ²	—	
		Under continuous vibration	5 to 8.4Hz	—	1.75mm	
8.4 to 150Hz	4.9m/s ²		—			
Shock resistance	Compliant with JIS B 3502 and IEC 61131-2 (147 m/s ² , 3 times each in 3 directions X, Y, Z)					
Operating atmosphere	No corrosive gases					
Operating altitude *1	0 to 2000m					
Installation location	Inside a control panel *2					
Overvoltage category *3	II or less					
Pollution degree *4	2					

- *1 : Do not use or store under pressure higher than the atmospheric pressure of altitude 0m.
*2 : The enclosure is suitably designed for those specific environmental conditions, as applicable, and enclosure rate meets IP20 and minimum type 1 of UL 50.
*3 : This indicates the section of the power supply to which the equipment is assumed to be connected between the public electrical power distribution network and the machinery within premises.
Category II applies to equipment for which electrical power is supplied from fixed facilities.
*4 : This index indicates the degree to which conductive material is generated in terms of the environment in which the equipment is used.
Pollution level 2 is when only non-conductive pollution occurs. A temporary conductivity caused by condensing must be expected occasionally.

2.2 Hardware Specifications

Item	Specifications
Rated input voltage / current	24VDC/100-240VAC (+10/-15%), 2A/point, 8A/common

3. Products Required by the Conversion Adapter

(1) Conversion Adapter Anchor Base (Sold Separately)

The Conversion Adapter Anchor Base secures the bottom of the Conversion Adapter. One anchor base is required per base unit.

Conversion Adapter Anchor Base Model	Specifications	Weight (g)
ERNT-1AR12F	12-slot conversion adapter anchor base	780
ERNT-1AR8F	8-slot conversion adapter anchor base	545
ERNT-1AR5F	5-slot conversion adapter anchor base	365

(2) Base Adapter (Sold Separately)

Both the MELSEC iQ-R Series Base Unit and the Conversion Adapter Anchor Base can be installed on the Base Adapter without drilling screw holes. However, drilling screw holes (M5 screws) is required to install the Base Adapter to the panel surface. For the Base Unit models marked with *1 to *3, two or more Base Adapter models are applicable. Select the most suitable Base Adapter according to the product dimensions.

Base Adapter Model	Installable			Product dimensions	
	MELSEC iQ-R Series Base Unit 12 slots	8 slots	5 slots	Width×Height (mm)	Weight (g)
ERNT-AQB38N	R312B	R38B(*1)	R35B	ERNT-1AR12F ERNT-1AR8F	480×240 970
ERNT-AQB35N	R312B	R38B(*1)	R35B	ERNT-1AR8F ERNT-1AR5F	382×240 795
ERNT-AQB68N	R612B	R68B(*2)	R65B(*3)	ERNT-1AR12F ERNT-1AR8F	466×240 930
ERNT-AQB65N	R612B	R68B(*2)	R65B(*3)	ERNT-1AR8F ERNT-1AR5F	352×240 790
ERNT-AQB58N	R612B	R68B(*2)	R65B(*3)	ERNT-1AR8F	411×240 870
ERNT-AQB55N	R612B	R68B(*2)	R65B(*3)	ERNT-1AR5F	297×240 655

4. Conversion Adapter Product Specifications

For detail specifications which do not appear in the specification comparison charts contained herein, see the user's manual supplied with the MELSEC iQ-R Series module you use. Also, check that the specifications of the connected devices meet the specifications of the MELSEC iQ-R Series Module.

Conversion Adapter Model	MEMOCON-SC GL Series (2000 Series I/O) Module model	No. of Output Points	MELSEC iQ-R Series Module Model		Conversion Adapter Weight (g)
			No. of modules		
ERNT-1Y2R904914	JAMSC-B2904 JAMSC-B2914	16 points	RY18R2A	2	250

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